ABSTRACT OF THE DISCLOSURE

Accuracy is assured by using phoneme context dependent acoustic models even at word boundaries and also time increase of a processing amount is suppressed even in large-vocabulary continuous speech recognition. A phoneme context dependent acoustic model storage unit contains phoneme state trees in each of which state sequences each consisting of a preceding phoneme state, a center phoneme state, and a succeeding phoneme state are configured in a tree structure with triphone models with the same preceding phoneme and triphone models with the same center phoneme collected. Accordingly, a forward matching unit has only to develop one phonemic hypothesis regardless of a leading phoneme of the succeeding word, by referencing the phoneme state trees, language models stored in a language model storage unit, and a word lexicon. Thus, development of hypotheses is easy regardless of in-word or word-boundary state. Moreover, an operation amount in performing matching with feature parameter sequences from an acoustic analysis unit can be remarkably reduced.